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Two souls are dwelling in my breast: uncovering how individuals in their dual role as consumer-citizen perceive future energy policies

original research article

Rico Defila[a]*, Antonietta Di Giulio*[a]*, Corinne Ruesch Schweizer*[a]

[a]University of Basel, Program Man-Society-Environment (MGU), Research Group Inter-/Transdisciplinarity, Vesalgasse 1, CH-4051 Basel, Switzerland

Corresponding author

Dr. Antonietta Di Giulio
Research Group Inter-/Transdisciplinarity
Program Man-Society-Environment (MGU)
University of Basel
Vesalgasse 1, CH-4051 Basel, Switzerland
antonietta.digiulio@unibas.ch

Email co-authors

Defila Rico: rico.defila@unibas.ch
Di Giulio Antonietta: antonietta.digiulio@unibas.ch
Ruesch Schweizer Corinne: corinne.ruesch@unibas.ch

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Abstract

The future of energy depends on present decision-making, and present decision-making depends on assumptions about future effects of energy policy. Individuals have two roles in this: In their citizen-role they have to consent to measures and support their implementation, in their consumer-role they have to adopt and implement measures in their behaviour. Our question is, how distinct these roles are with regard to how they inform individuals' perceptions and concerns related to energy policy options. By applying the "Futures Wheel" method we explored how individuals think future energy policy measures would impact their lives (consumer-perspective). By asking them whether and for what reasons in a voting they would say "yes" or "no" to them we inquired into their assessment of these measures from a citizens' perspective. Our results show that the two roles consumer and citizen trigger different patterns of thinking. Energy policy design and decision-making should consider both. Life quality and justice are important for individuals in both roles. The "Futures Wheel" method helps uncovering assumptions about the future individuals are unaware of and is a suitable method to explore anticipated effects of energy policy options. It might be useful to facilitate societal debate about the future of energy.

Keywords
Futures Wheel; consumer perspective; citizen perspective; futures studies; good life; justice; acceptance; sustainable consumption

1. Introduction – why it makes sense to explore into individuals' assumptions related to future energy options

A transition to a sustainable 'energy future' cannot be achieved by addressing only technological issues (e.g. Delina& Janetos 2018; Kalkbrenner&Roosen 2016; Spreng 2017; Wagner et al. 2016). Rather, the energy use of individuals and households has to be addressed as well. Individuals (and households) are consumers of energy products and services (incl. infrastructures). In this role as consumers they account for a significant proportion of energy use (when accounting is done by actors and not by sectors or similar, as has been shown by Stern 2014, 43 and Stern 2017, 93), and because the potential of reducing the energy use of individuals (and households) is quite large, addressing consumers and their behaviour is an important part of sustainable energy policy (e.g. Brown 2017/in press; Mont&Plebys 2007; Owens&Driffill 2008). The necessary behavioural change is not restricted to changes towards energy efficiency, but entails fundamental changes of consumption patterns leading to a significantly reduced demand of energy (called "strong sustainable consumption" by Fuchs&Lorek 2005).

But individuals play a crucial role not only in their role as consumers. Designing and deciding about energy policy is not confined to governmental bodies, politicians, and technical experts, it involves individuals in their role as citizens as well (e.g. Kalkbrenner&Roosen 2016; Stern 2014; Stern 2017). Citizens influence decision-making either indirectly by accepting, supporting or resisting changes and thus influencing other policy-making actors or directly by consenting or refusing policy options in democratic decision-making processes.

In the case of policies that address consumer behaviour, individuals are actors participating in enacting change, actors affected by change, and "essential contributors to the effective execution of the selected (...) options" (Dowd&Hobman 2013, 191). Most scholars agree that the transition to a sustainable 'energy future' cannot be achieved without societal acceptance by consumers and citizens, and they also agree, that this is one of the major challenges of energy policy (e.g. Bechtold et al. 2008; Dowd&Hobman 2013; Harring&Jagers 2013; Kalkbrenner&Roosen 2016; Kallbekken&Sælen 2011; Perlaviciute et al. 2016; Raven et al. 2009; Schweizer-Ries 2008; Steg et al. 2005). With regard to policies aimed at changing patterns of consumption, the challenge of acceptance can be specified as follows: In their role as citizen individuals have to consent to such policy measures and to support their implementation, and in their role as consumer they have to adopt and implement such measures in their behaviour.

The complexity of the challenge is augmented by the circumstance that there is no such thing as absolute certainty and completeness of knowledge to draw on in designing and deciding on policy options leading to a sustainable 'energy future' for sure. Even "for an expert, it is not easy to validate or falsify" knowledge, because there might be different context-specific truths (Vries&Peterson 2009, 1012). Accordingly, policy decisions cannot be based solely on scientific knowledge (Sovacool 2014). Rather, the knowledge to proceed from is a mixture of "personal knowledge" and "community knowledge" the way it is represented in a society, and in a democratic society "worldview pluralism" has to be acknowledged (ibid., 1016), because a plurality of roles, perspectives and practices impacts the future of energy and energy policy (Delina&Janetos 2018). This entails much more than just acknowledging the existence of different bodies of declarative knowledge. For energy policies to be accepted and effective, they have to be in line with the concerns and values of the different stakeholders, and with their perception and assessment of the outcomes of these policies (e.g. Perlaviciute et al. 2016; Stern 2014, 45f; Stern 2017, 92f; Wagner et al. 2016, 158f). With regard to policies aimed at changing patterns of consumption individuals as consumers and as citizens are relevant stakeholders whose concerns and perceptions have to be considered in policy design and in the design of decision-making processes. Thus, there is a need to find out more about policy-related concerns of consumers and citizens and how they perceive policy options, because knowing more about these concerns and perceptions would allow to design and frame policy processes in ways addressing citizens' and consumers' concerns and with that increasing acceptance of policy options. And because an individual acting in the role of citizen might affect its own scope of action in its role as consumer, there is a need to find out whether and to what extent individuals proceed from different patterns of thinking when acting in these two roles.

Assuming that there is such a thing as *the* worldview of consumers or of citizens to draw on in designing policy options would be rather naïve. Perceptions and concerns differ and change, at least in part, across time and society. And how policy options are perceived is not independent of how the specific policy options are designed and of how they are publicly discussed. Hence, knowledge about concerns and perceptions of consumers and citizens is at least partly transitory. It would thus not be advisable to design future policy options exclusively based on the knowledge about the perceptions and concerns related to past policy options. Furthermore, knowing whether policy-making was in line with concerns and perceptions of consumers or of citizens or not in the aftermath of public decision-making might shed light on why policy-making succeeded or failed, but such knowledge is of academic value only. In order to improve future energy policy, knowledge about perceptions and concerns informing decisions lying ahead is needed, and it is necessary to know how to uncover such perceptions and concerns in advance. This complies with the call of Vries and Peterson who argue in favour of looking for and applying methods that help exploring possible futures and different policy options from the perspectives of different worldviews in order to increase the effectiveness, legitimacy and robustness of policies (Vries&Peterson 2009, 1016). We know from recent research on life events that anticipating the future is actually done by individuals, and that it informs decisions and actions of individuals in the present. This research shows that individuals anticipate the impacts of future events on their everyday life and take decisions on this basis long before the event occurs (e.g. Schäfer&Jaeger-Erben 2012). This sums up to the conclusion that it might make sense to inquire into the perceptions and concerns of consumers and of citizens related to (potential) future energy policy options not only in research, but also in the process of policy-making.

We investigate consumers' and citizens' perception of (future) policy options and their concerns in a research project funded by the Swiss National Science Foundation (SNSF) as part of its National Research Programme (NRP) 71 "Managing Energy Consumption" (2015-2017).[1] In this paper we will present results to the following research questions: What are the individuals' assumptions about future impacts of energy policy measures on their own life (consumer perspective)? How do individuals assess energy policy measures in their role as citizens and what are their reasons for accepting/rejecting measures (citizen perspective)? Are anticipated impacts of energy policy measures on peoples' own life (consumer perspective) decisive for how they decide upon these measures in their role as citizens (citizen perspective)?

[1] Project title: "Towards societal consensus – Influencing the perception and evaluation of energy policy measures by means of self-reflection and information". Project team: Rico Defila (attorney at law, co-leader), Antonietta Di Giulio (philosophy, co-leader), Patricia Holm (biology, co-leader); Philipp Hirsch (biology, research associate), Corinne Ruesch Schweizer (educational sciences, research associate).

The paper is structured as follows: In section 2 we explain our choice of methods, our choice of energy policy measures serving as point of departure for our study, and how the interviews were executed. In section 3 we present the results of our study. In section 4 we discuss our results, and in section 5 we draw some conclusions with a view to future societal debates on energy policy.

2. Methods applied and point of departure for the interviews

Uncovering how individuals perceive (future) energy policy measures in their role as consumer and as citizen and uncovering their concerns related to these measures is not bound to observing their actual behaviour as consumer and as citizen. A discursive, narrative approach allowing for individuals to unfold their thoughts is suited to inquire into these topics. What is necessary though, is to find a narration matching a 'cognitive activity' of an individual as consumer and a 'cognitive activity' of an individual as citizen.

2.1 Choice of methods

Method 1: "Futures Wheel" to inquire into anticipated impacts of policy options (consumers' perspective)

Inquiring into (real or assumed) impacts of energy policy measures on the individual lives of consumers necessitates an approach taking into account the comprehensive nature of consumption for one thing, and of behavioural change for another thing (e.g. Brown 2017/in press; Kaufmann-Hayoz et al. 2012; Owens&Driffill 2008). Consumption is the utilisation of goods (products, services, infrastructures, both material and non-material) in order to manage daily life and to realise an individuals' notion of a life he/she values. It encompasses a broad range of interacting acts, it is embedded in a complex web of social, cultural, and material contexts, and it is informed by both individual as well as social norms and values. Behavioural change in turn has to be embedded into daily practices, and to capture behavioural change the complexity of everyday life has to be considered.

Investigating an individuals' assumptions about future impacts of a (potential) future energy policy measure on his/her own life necessitates a method meeting two criteria: It has, firstly, to be suitable in helping to explore a possible future. It has, secondly, to allow for a comprehensive narration covering the complexity of everyday life the way this life is perceived by the individual to be after the posited implementation of the energy policy measure. This led us to the field of futures studies. Futures studies is a research area "concerned with a wide range of views about possible, probable and preferable futures" (Benckendorff 2008, 25f; see also e.g. Slaughter 1996; List 2004; Glenn 2009a). A common and rather basic classification of methods aimed at generating information about the future distinguishes prescriptive (normative) and descriptive (exploratory) methods, the first being normative in their approach in that they seek to define how the future should be, the latter seeking to describe what the future will or could be (e.g. Gordon 1994). Another basic differentiation is to distinguish quantitative from qualitative methods (ibid.). More sophisticated classifications distinguish extrapolative methods, exploratory methods, modelling, scenarios, participatory methods and normative methods (e.g. Benckendorff 2008). Furthermore, the methods can be differentiated according to the level of professionalization in terms of in-depth scientific knowledge and/or technical skill needed by those applying them and/or being subjected to them. To serve our goal, the method to apply had to be descriptive (to explore a possible future), qualitative (to cover the complexity of daily life as perceived by individuals), easy to understand, and it had to proceed from possible (future) policy decisions.

The "Futures Wheel" method best met these requirements: Invented by Jerome Glenn 1971, it is a descriptive and qualitative method (e.g. Snyder 1993; Gordon 1994, 3f.; Glenn 2009a, 8), not only especially designed to explore consequences of "trends, events, emerging issues, and future possible decisions" (Glenn 2009b, 1), but also having been unanimously described as a simple technique that is easy to understand and can be applied in different contexts and with heterogeneous societal groups while at the same time producing substantial information (e.g. Slaughter 1996; Benckendorff 2008; Benckendorff et al. 2009; Glenn 2009b). "Futures Wheel" allows the identification of assumed direct (primary) and indirect (secondary, tertiary etc.) consequences of (future) events/decisions. It is either used as a group discussion technique or as a tool for individuals to identify assumed consequences of

organizational changes and/or personal decisions (see e.g. www.mindtools.com, accessed February 23 2017). As far as we know, "Futures Wheel" has not yet been applied to energy policy options, that is, the method has never been used in a context similar to our research project, although sustainable development is a context where futures studies methods are used quite frequently, be it to develop (normative) desirable futures and/or planning their achievement (e.g. through backcasting), be it to explore risks and opportunities of possible futures (e.g. Anderson 2001; Quist&Vergragt 2006; Benckendorff et al. 2009; Patokorpi&Ahvenainen 2009).

The "Futures Wheel" method leads to drawings visualising anticipated impacts of a specific (possible future) event/decision. The starting point is a specific event assumed to have occurred or a specific decision assumed to have been taken. In a first step the assumed direct impacts of this future situation that is taken as a given are explored. In subsequent steps the assumed impacts of these first order impacts are explored leading to second order impacts, then the assumed impacts of the identified second order impacts are explored leading to third order impacts and so on (see figure 1 for an example). According to the literature, the method is suited to explore the diversity of assumed direct and indirect impacts (e.g. Benckendorff 2008; Bengston 2015). In our inquiry, we developed individual Futures Wheels in the framework of a semi-narrative interview to capture what individuals in their consumer-role imagine to be the future impacts of energy policy measures on their own lives.

FIGURE 1

Figure 1 – What a Futures Wheel looks like: To introduce, for instance, taxes on fossil fuels (MT) might affect how people commute (Co), it might impact their leisure behaviour (Le) or their choice of vacation (Va) – and so on (I_1). If people change their way of commuting (Co) this might influence their daily shopping habits (Sh) and/or their families' breakfast organisation (Br) – and so forth (I_2). These second order impacts (I_2) likewise have third order impacts (I_3).

Method 2: Voting to inquire into agreement and disagreement to policy options (citizens' perspective)

Inquiring into how individuals assess a (potential) future energy policy measure in their citizen-role and into their reasons for accepting/rejecting this measure necessitates a discursive activity leading an individual to react to this policy measure in his/her role as citizen, and this activity has to be easily integrated in a semi-narrative interview. This activity has to be confined to the citizen-role as much as possible and it has to be familiar to respondents. For the Swiss context, this can be easily done by simulating a quite common situation in Switzerland, that is, an activity individuals are regularly asked to perform: voting.

Voting in Switzerland is not necessarily restricted to a simple yes or no, but part of a broader discursive process. Quite often it is accompanied by asking people about their reasons for voting yes or no. This takes place either on a voluntary basis (usually online and initiated by newspapers) or on a more systematic basis with the help of surveys before and/or after the date of voting. Mostly, this is based on a given list of possible reasons in favour or against the measure in question. In our inquiry, in order to capture the reasons given by the individuals in their citizen-role we adapted this part of the activity in the semi-narrative interview by not providing such a list of reasons.

2.2 Choice of energy policy measures as point of departure for the interviews

For both methods 1 and 2, "Futures Wheels" and simulated voting, we needed specific (potential) future energy policy measures serving as point of reference. To ensure our study would lead to results not being confined to only one specific policy measure we wanted to work with three different policy measures. Each respondent should be given one out of three policy measures as point of departure (a) to inquire into its impacts he/she anticipated on his/her individual life (consumer perspective) and (b) to inquire into how she/he would react to it in a voting (citizen perspective).

To serve our purpose and to ensure the setting of our inquiry to be as close to everyday experiences as possible, we needed measures that would highly impact people's everyday lives, that could actually be an important part of the Swiss energy policy, and that could be actually subjected to voting in

Switzerland. Therefore, we did not invent our three measures but chose them from those measures that actually belonged to the Swiss "Energy Strategy 2050" at the time of our study. We did so by means of a document analysis and by means of transdisciplinary group discussions involving 22 experts (scholars and practitioners). The analysis of the documents the Swiss "Energy Strategy 2050" consists of, led to a short-list of 30 measures out of a total of 182 measures mentioned in these documents. This short-list was subjected to transdisciplinary group discussions, and the results of these discussions in turn informed the final selection of our three measures: (1) Markedly high fuel prices (5 CHF per liter)[2], (2) prominently expanded public transport, and (3) comprehensive management of parking lots. To serve as vignette for the interviews each of these measures were described in 2-5 sentences.

2.3 Interview and sample

How the interviews were executed

The interviews consisted of two parts, arranged consecutively to find out whether and how respondents switch from one role to the other. In the first part, we addressed respondents in their consumer-role (anticipation of impacts on their own lives) and in the second part in their citizen-role (simulated voting). Each respondent was assigned one out of three energy policy measures. The measure-vignette (2-5 sentences) was lying on the table during the interview.

The first part of the interview was devoted to the impacts of the assigned energy policy measure on his/her own life anticipated by the respondent (consumer perspective). The anticipated impacts were visualised in a (personal) Futures Wheel the interviewer drew in front of the respondent, based on the respondents' narration. The question to start the development of the Futures Wheel was, depending on the measure assigned to the individual respondent: "Let us assume <measure (1) or (2) or (3)> – how would this affect your life, that is, what would change, what would be different?" Under the guidance of the interviewer the respondent named the direct impacts he/she thought this measure would have on her/his life and the impacts these impacts might in turn have (second and third (etc.) order impacts). In order to capture the respondents' way of structuring the anticipated impacts no criteria on how to select and/or structure these impacts was given in advance, that is, there were no predefined areas to consider (Glenn 2009b, 10). This part of the interview lasted between 15 min. and 1 hour (see figure 2 for an example).

In order to find out to what extent developing a Futures Wheel does support individuals in clarifying their assumptions about (direct and indirect) impacts of energy policy measures on their daily life, prior to engage into developing the Futures Wheel respondents were asked how they think <measure (1) or (2) or (3)> would affect their life (opening stimulus). In the subsequently developed Futures Wheel the respondents' narration to this opening stimulus was integrated and tagged for future analysis. In total, 48 Futures Wheels were developed for subsequent analysis.

FIGURE 2 (should be printed in colour)

Figure 2 – What a Futures Wheel developed during an interview in our study looks like: In order to visually distinguish 1st order impacts from 2nd order impacts and in order to consciously proceed from 1st order impacts to 2nd order impacts, the interviewer stopped collecting 1st order impacts by drawing a coloured line as soon as the respondent said he/she could think of no more impacts (and the same for 2nd order impacts etc.).

The second part of the interview was devoted to how the respondent would assess the assigned energy policy measure in his/her citizen-role (citizen perspective). The question to the respondent was whether and for what reasons in a voting taking place within the next few days she/he would say "yes" or "no" to this measure. This part of the interview took place immediately after the respondent had completed his/her personal Futures Wheel and without removing the Futures Wheel from the table. It lasted from 5 min. to approx. 20 min.

[2] At the time of our study the price was 1.50 CHF or 1.60 CHF per liter depending on the type of fuel.

Study sample

The sample for our study was built by quota (the characteristics of quota sampling being gender, age, educational level, place of residence) and consists 48 respondents. The quota of each characteristic in the sample (table 1) matches the distribution in the Swiss population (aged 20 and older). The single characteristics have been independently calculated.

Table 1
Sample: 48 respondents, built by quota.

Gender		**Age**		**Educational level**		**Place of residence**	
Men	24 (50%)	20-39	16 (33%)	ISCED 0-2	10 (21%)	Country	13 (27%)
Women	24 (50%)	40-64	21 (44%)	ISCED 3-5(6)	23 (48%)	Urban	27 (56%)
		65 upwards	11 (23%)	ISCED 6-8	15 (31%)	Town (> 70'000)	8 (16%)

2.4 Data analysis

Reprocessing and coding Futures Wheels

Based on the 48 drawings made during the interviews and on the audio-recordings of the interviews we reprocessed the respondents' Futures Wheels (see figure 3) for clarity and comprehensibility. Afterwards, we inductively developed a category system and used these categories to encode the single statements in the Futures Wheels using the data analyses software MAXQDA. The category system as well as the data coding were validated in the research group. To enhance credibility of coding we used the strategy of rater triangulation and discussed differences in coding until achieving consensus.

FIGURE 3

Figure 3 – Example of a reprocessed Futures Wheel in our study: The drawings made during the interviews were reprocessed in order to allow for subsequent encoding and qualitative analysis. Double lines were used to tag answers to the opening stimulus prior to creating the personal Futures Wheel.

The coding does not capture the exact content of a statement or its exact wording but only the dimension of life the statement refers to. Respondents were not asked whether the changes they anticipate are for the better or for the worse as we were not interested in an assessment of the single changes but in learning to know what kind of impacts respondents think of. Accordingly, single changes can be both, changes for the better or for the worse. The system of categories is organised as follows (table 2):

Table 2
Categories used to encode the statements in the Futures Wheels (consumer perspective).

Life domains	Domains and (bundles of) activities of daily life (including external conditions referring to life domains) respondents mentioned in naming changes that would be caused by the energy policy measure. In the absence of a convincing theory of life domains and everyday activities these domains and activities have been categorised according to what respondents mentioned without any further structure.
Good life, needs and values	Issues concerning quality of life and needs respondents named in anticipating changes due to the energy policy measure (including activities of need satisfaction). The category also covers statements in which respondents explicitly pointed out their wellbeing and/or health (physical and/or mental) would change, and it covers statements of respondents in which they named impacts on their individual value system or on the congruence with their individual value system. These categories, although inductively gained, can be related to theories about wellbeing and human needs (e.g. Ryff 1989; Abbott et al. 2010; Ryan&Deci 2001).
Resources	Changes related to resources available to the respondent and/or the respondents' household respondents mentioned in pointing out changes caused by the energy policy measure (including natural resources).

Emotions	This category covers good and bad feelings respondents said would be caused by the energy policy measure.

The Arguments for/against the policy measures

Based on the audio-recordings of the interviews we paraphrased the respondents' arguments in reasoning for or against the energy policy measure. These paraphrases were validated in the research group. We adopted the same procedure as with the analysis of the Futures Wheels to develop the categories and encode the single arguments (see above).

The coding does not capture the exact content of a statement or the exact wording but only the issue the statement refers to as we were not interested in the single arguments but in learning to know what kind of arguments respondents think of. The system of categories is organised as follows (table 3):

Table 3

Categories used to encode the reasons given for/against the energy policy measure (citizen perspective).

Basic approach	Reasons for/against the measure dealing with the basic approach of the energy policy measure such as its design, its appropriateness or its legitimacy.
Organisation	Reasons for/against the measure dealing with issues of the implementation of the energy policy measure.
Reasonableness	Reasons for/against the measure dealing with the question whether the effort to implement the energy policy measure in terms of time and money can be expected of individuals, the private sector or the community.
Impact	Reasons for/against the measure either addressing the question of whether the energy policy measure is effective in changing human behaviour or addressing undesirable or desirable side-effects of the measure.
Outcome	Reasons for/against the measure dealing with the outcome of the energy policy measure.
Personal matters	Reasons for/against the measure referring to the respondents' personal willingness to change his/her behaviour, to his/her voting behaviour, or to his/her desire that things may change.

3. Results

3.1 Anticipated impacts of the energy policy measures (consumers' perspective)

The results show that respondents in anticipating impacts of the three selected energy policy measures on their own lives thought in terms of life domains, of life quality, resources and emotions. Table 4 shows the dimensions of life respondents mentioned in their Futures Wheels, that is, the life domains, elements of good life, resources, and emotions respondents think would be affected by the selected measures (aggregated results). Tables 5-7 show the results differentiated according to the three measures.

Table 4

Life domains, elements of good life, resources, and emotions the selected energy policy measures would affect according to the respondents' anticipation (N=48), aggregated results

Affected dimension	*FW*	*Affected dimension*	*FW*	*Affected dimension*	*FW*
Life domains		**Good life, needs and values**		**Resources**	
Mobility	44	Social relations	35	Finances	41
Leisure	40	Wellbeing/health	31	Time	23
Shopping	33	Freedom/self-determination	25	Natural Resources	15
Work	25	Security	11		
Dwelling place, housing	16	Develop one's own personality	8	**Emotions**	
Living environment	13	Consistency with one's own values	8	Good feelings	18
Civic engagement	10	Solidarity	7	Bad feelings	13
Nutrition	7				

Waste disposal	7
Religion	1
Sleep	1

The number behind each entry gives the number of Futures Wheels (FW) in which the respective category has been used to encode at least one statement.

On life domains: Although all selected measures address mobility, respondents thought that not only mobility, but a broad diversity of life domains would be affected by these measures. What surprised us was that 10 out of 48 respondents pointed out the measure assigned to them would impact their civic engagement. Most respondents, 39, imagined the measure would affect 3 to 5 different life domains, 5 respondents imagined it would affect 6 or more life domains, 4 respondents imagined it would affect less than 3 life domains.

On quality of life: Only 2 respondents in anticipating the impacts of the policy measure did not mention elements of good life at all. Most of them, 34, mentioned 2 to 4 different aspects of good life they think would be influenced by the measure, be it beneficial or detrimental (with regard to freedom for instance we find both: more freedom and less freedom). 3 respondents mentioned 5 aspects of good life, and 9 respondents mentioned 1 element of good life.

On resources: While it is not surprising that almost all respondents, 41, pointed out the policy measure would affect their financial resources we were surprised at the number of respondents, 23, mentioning the resource time. We were also surprised by the fact that natural resources were mentioned so little, only 15 respondents did so, although respondents knew they were participating in an inquiry related to energy policy – we would have expected some kind of bias leading them to mention natural resources more pointedly. Only 1 respondent did not mention any kind of resources in his/her anticipation of impacts.

On emotions: Respondents imagined the measure assigned to them would affect their emotions by causing good or bad feelings. Emotions were mentioned by a total of 28 respondents. 3 mentioned both good and bad feelings, 10 only bad feelings, and 15 only good feelings.

Differences concerning the dimensions of life affected by the different energy policy measures: There are only little differences across the three measures with regard to the dimensions of life respondents imagine would be affected by these measures (tables 5-7). The most salient one is the life domain waste disposal, mentioned by 7 respondents, but exclusively in the context of measure 2. This was most likely triggered by the substantiation of the measure given to the respondents (vignette), because home delivery and collection of special waste were part of how measure 2 was substantiated.

Table 5

Life domains, elements of good life, resources, and emotions markedly high fuel prices (5 CHF per liter) would affect according to the respondents' anticipation (measure 1, N=14).

Affected dimension	*OS*	*FW 1*	*FW 2*	*FW 3/>*
Life domains				
Mobility	9	3	1	0
Leisure	5	8	0	0
Shopping	2	5	3	0
Work	6	3	0	0
Dwelling place, housing	1	3	1	1
Living environment	0	1	3	1
Civic engagement	0	2	1	0
Nutrition	0	0	2	0
Waste disposal	0	0	0	0
Religion	0	0	0	0
Sleep	0	0	0	0

Affected dimension	*OS*	*FW 1*	*FW 2*	*FW 3/>*
Good life, needs and values				
Social relations	5	2	1	1
Wellbeing/health	0	2	7	0
Freedom/self-determination	0	0	6	0
Security	0	0	3	0
Develop one's own personality	1	0	2	1
Consistency with one's own values	0	0	1	1
Solidarity	1	0	2	1
Resources				
Finances	2	4	8	0
Time	0	2	5	0
Natural Resources	0	2	5	1
Emotions				
Good feelings	0	2	1	2

Bad feelings	0	1	2	1

The different columns show how many respondents mentioned the affected dimension for the first time in their reaction to the opening stimulus (OS), in thinking about 1st order impacts (FW 1), about 2nd order impacts (FW 2), or about impacts of 3rd (or higher) order (FW 3/>).

Table 6

Life domains, elements of good life, resources, and emotions expanded public transport would affect according to the respondents' anticipation (measure 2, N=22).

Affected dimension	*OS*	*FW 1*	*FW 2*	*FW 3/>*
Life domains				
Mobility	13	2	5	0
Leisure	5	9	3	2
Shopping	9	4	3	0
Work	3	4	2	0
Dwelling place, housing	3	4	1	1
Living environment	1	1	0	1
Civic engagement	0	0	2	1
Nutrition	0	0	3	0
Waste disposal	6	1	0	0
Religion	1	0	0	0
Sleep	0	0	1	0

Affected dimension	*OS*	*FW 1*	*FW 2*	*FW 3/>*
Good life, needs and values				
Social relations	7	6	4	1
Wellbeing/health	5	3	7	2
Freedom/self-determination	2	3	6	1
Security	1	0	2	1
Develop one's own personality	0	0	2	2
Consistency with one's own values	1	2	2	0
Solidarity	1	1	1	0
Resources				
Finances	5	6	4	0
Time	2	3	6	0
Natural Resources	0	2	1	2
Emotions				
Good feelings	1	2	3	5
Bad feelings	2	0	2	2

The different columns show how many respondents mentioned the affected dimension for the first time in their reaction to the opening stimulus (OS), in thinking about 1st order impacts (FW 1), about 2nd order impacts (FW 2), or about impacts of 3rd (or higher) order (FW 3/>).

Table 7

Life domains, elements of good life, resources, and emotions comprehensive management of parking lots would affect according to the respondents' anticipation (measure 3, N=12).

Affected dimension	*OS*	*FW 1*	*FW 2*	*FW 3/>*
Life domains				
Mobility	8	2	1	0
Leisure	2	4	1	1
Shopping	4	3	0	0
Work	4	2	0	1
Dwelling place, housing	0	0	0	1
Living environment	1	1	3	0
Civic engagement	0	1	1	2
Nutrition	0	0	0	2
Waste disposal	0	0	0	0
Religion	0	0	0	0
Sleep	0	0	0	0

Affected dimension	*OS*	*FW 1*	*FW 2*	*FW 3/>*
Good life, needs and values				
Social relations	3	5	0	0
Wellbeing/health	0	0	2	3
Freedom/self-determination	2	0	2	3
Security	1	1	2	0
Develop one's own personality	0	0	0	0
Consistency with one's own values	1	0	0	0
Solidarity	0	0	0	0
Resources				
Finances	6	3	2	1
Time	0	0	5	0
Natural Resources	1	1	0	0
Emotions				
Good feelings	0	1	1	0
Bad feelings	1	1	1	0

The different columns show how many respondents mentioned the affected dimension for the first time in their reaction to the opening stimulus (OS), in thinking about 1st order impacts (FW 1), about 2nd order impacts (FW 2), or about impacts of 3rd (or higher) order (FW 3/>).

3.2 Reasons for consenting or rejecting an energy policy measure (citizens' perspective)

Directly after completion of their Futures Wheel respondents were asked whether and for what reasons in a voting taking place within the next few days they would vote "yes" or "no" to the measure assigned to them (see above: this activates the citizen-role in a way familiar to respondents in Switzerland). Table 8 shows the results of the simulated voting (in %). The results differ across the measures, but there is always a considerable group of respondents in favour and against the measure in question.

Table 8

Results of the simulated voting for each of the three measures in rounded percent (N=48).

Measures	*Vote "Yes"*	*Vote "No"*	*Blank (no vote)*
1: Markedly high fuel prices (5 CHF per liter) (N=14)	43%	57%	0
2: Prominently expanded public transport (N=22)	59%	23%	18%
3: Comprehensive management of parking lots (N=12)	33%	67%	0
Overall	*48%*	*44%*	*8%*

Table 9 shows the issues respondents referred to in justifying their vote. In their reasoning for or against the policy measure the respondents basically did not draw on how the measure would (according to them) impact their own life. They brought forward arguments related to the basic approach of the measure, to its implementation, to whether it is deemed to be reasonable to different actors (community, individuals in general, the respondent, businesses), arguments related to the impact and to the outcome of the measure. Only few arguments relate to how the measure would affect the respondents (whether it can be expected of the respondent, freedom of respondent, wellbeing/health of respondent, living standard of respondent), or to other personal matters (such as respondents' willingness to adapt or his/her voting behaviour), and none refers to life domains. Some of the issues addressed in the arguments were brought forward by both proponents and opponents (such as reasonableness to individuals, justice or individual freedom). Others were mentioned primarily by proponents (such as efficacy in changing human behaviour, environmental protection or wellbeing/health) or primarily by opponents (such as the measures' design and feasibility or the living standard of the respondent).

Table 9

Issues addressed by the respondents' arguments in favour/against the measures (N=48).

Arguments refer to	*Arguments address*	*Vote "Yes"*	*Vote "No"*	*Blank (no vote)*
Basic approach of measure	Appropriateness	3	7	0
	Appropriateness (focused on efficiency)	0	2	0
	Appropriateness (focused on sufficiency)	5	1	0
	Design	5	9	1
	Legitimacy	2	1	0
Organisation (Implementation)	Feasibility	1	6	1
Reasonableness: whether the effort can be expected of ...	... the community	2	3	0
	... individuals	8	9	1
	... the respondent	4	1	1
	... businesses	0	4	0
Impact	Undesirable side-effects	1	5	3
	Desirable side-effects	3	0	0
	Effective in changing behaviour	17	7	0
Outcome	Environmental protection	13	6	0
	Social justice	7	8	0
	Intergenerational justice	2	1	0
	Good life: Freedom	3	4	0
	Good life: Freedom of respondent	0	4	0
	Good life: Wellbeing/health	5	0	0
	Good life: Wellbeing/health of respondent	4	0	0
	Good life: Security	2	0	0
	Living standard of respondent	0	5	0
Personal matters	Respondents' willingness to change his/her behaviour	0	1	1
	Respondents' voting behaviour	2	1	1
	Respondents' desire that things may change	1	0	0

The different columns show how many times each category has been used to encode single arguments in favour/against the selected energy policy measures. Arguments addressing impacts of the measure on the respondent are encoded accordingly.

3.3 Relating consumer perspective and citizen perspective

To explore whether and how the perception of energy policy measures from a consumer-perspective and from a citizen-perspective relate, we linked the respondents' answers in the two parts of the interview. We wanted to find out whether there is a pattern that distinguishes proponents and opponents of the selected policy measures with regard to the dimensions of life they refer to when they anticipate impacts of these measures. Table 10 shows which life domains, elements of good life, resources, and emotions respondents imagined would be affected by the selected policy measures, arranged according to their vote in favour or against these measures. With regard to most of the dimensions of life that according to the respondents' anticipation would be affected by the measures there is no noticeable difference, that is, proponents and opponents mentioned more or less the same dimensions. The salient exceptions are that proponents anticipated more impacts on their living environment and on their waste disposal, and anticipated the measure would cause them good feelings, while opponents anticipated more impacts on their work, on their nutrition, and on solidarity. Although their personal Futures Wheel was lying right in front of them, only 9 out of 48 respondents at some time during their reasoning in favour or against the measure assigned to them explicitly referred back to it.

Table 10

How the dimensions of their lives respondents anticipated to be changed by the selected energy policy measures relate to them being in favour or against these measures (N=48).

Affected dimension	*Vote "Yes"*	*Vote "No"*	*Blank (no vote)*	*Affected dimension*	*Vote "Yes"*	*Vote "No"*	*Blank (no vote)*
Life domains				**Good life, needs and values**			
Mobility	20	18	4	Social relations	16	13	4
Leisure	17	19	2	Wellbeing/health	15	11	3
Shopping	14	14	3	Freedom/self-determination	13	9	2
Work	7	15	1	Security	4	4	2
Dwelling place, housing	6	7	2	Develop one's own personality	4	4	0
Living environment	8	3	1	Consistency with one's own values	5	3	0
Civic engagement	4	5	0	Solidarity	1	6	0
Nutrition	1	5	0				
Waste disposal	6	0	1	**Resources**			
Religion	1	0	0	Finances	19	17	2
Sleep	0	1	0	Time	12	9	1
				Natural Resources	7	7	1
				Emotions			
				Good feelings	14	3	1
				Bad feelings	4	7	1

The columns show how many times each category has been used to encode statements about the impact in the Futures Wheels of respondents who would vote "yes", who would vote "no" and who would not vote (blank).

3.4 Suitability of the "Futures Wheel" method to uncover individuals' assumptions about impacts of future energy policy measures

Additionally, we wanted to find out whether the "Futures Wheel" method actually does support individuals in clarifying their assumptions about (direct and indirect) impacts of (potential) future energy policy measures on their everyday life and whether it does lead to enriched insights into assumptions about these impacts. To this end we analysed, firstly, when in the course of the interview the respondents mentioned the life dimensions they assumed would be affected by the selected measures for the first time, that is, whether they mentioned them in their answers to the opening stimulus (prior to the development of their Futures Wheels), or whilst thinking about first order impacts, about second order impacts or about impacts of third or higher order (see section 3.1, tables 5-7). Secondly, we

compared the quantity of life dimensions respondents mentioned in their answers to the opening stimulus with the quantity of dimensions they mentioned in developing their Futures Wheels (table 11).

Direct and indirect impacts: 2 out of the 48 respondents did not answer to the opening stimulus by naming at least 1 assumed impact. 38 respondents answered to the opening stimulus by naming impacts, but stopped at first order impacts. In their answers to the opening stimulus only 7 respondents did mention not only a first order impact but also 1 second order impact, and only 1 respondent mentioned 1 third order impact. In the course of developing their personal Futures Wheels all 48 respondents anticipated second order impacts, and most of them named third order impacts as well.

Diversity of dimensions: Tables 5-7 show the increase of diversity with regard to life domains, elements of good life, resources, and emotions respondents thought of in the process of developing their Futures Wheels. One thing to notice is, that a number of life domains, elements of good life, resources, and emotions was not mentioned prior to developing the personal Futures Wheels. Another thing to notice is, that a number of life domains, elements of good life, resources, and emotions was not mentioned before respondents reflected about second order impacts. Table 11 shows that the quantity of dimensions increased considerably while respondents developed their Futures Wheels. Out of 13 respondents that mentioned 0 or 1 dimension in their answers to the opening stimulus, 2 ended up with three dimensions in their Futures Wheels, 5 with 4-6 dimensions, and 6 with 8-11 dimensions. 4 respondents in developing their Futures Wheels did not show a considerable growth in terms of the quantity of dimensions they mentioned (coefficient <1), but those 4 all mentioned 5 to 6 dimensions in their answers to the opening stimulus.

Table 11

Quantity of dimensions respondents mentioned in their answers to the opening stimulus and increase of quantity of dimensions they mentioned in their Futures Wheels (N=48).

N	*Quantity of dimensions in the answers to the OS (absolute number)*	*N*	*Increase of quantity of dimensions while developing the FW (coefficient)*
2	0	4	<1
11	1	5	1
7	2	24	>1 to 3
12	3	9	>3 to 6
10	4	6	>6 to 11
3	5		
3	6		
Total: 48		*Total: 48*	

The number indicating the quantity of dimensions respondents mentioned in their answers to the opening stimulus (OS) shows the absolute quantity, while the number indicating the increase of the quantity of dimensions respondents thought of while developing their Futures Wheels (FW) is a coefficient, that is, "1" indicates that the quantity of dimensions redoubled compared to the quantity the same respondents mentioned in responding to the OS.

4. Discussion

With regard to how individuals perceive future energy policy measures in their *consumer-role,* our results show, firstly, that it is possible to uncover a broad range of impacts individuals anticipate from a consumer perspective, if this is adequately facilitated by applying a suited method. They show, secondly, the diversity of dimensions consumers think of in anticipating how future energy policy measures would affect their own life. In thinking about impacts they assume to be likely effects of policy measures consumers do not solely think of how a policy measure might affect different life domains, but also of how it might affect their quality of life (incl. activities of need satisfaction), the resources at their disposal and their emotions. This leads to the conclusion that in assessing and discussing energy policy measures it would be a mistake to limit the focus on those life domains and/or activities directly addressed by the measure in question. This would be artificial and reductionist and would not do justice to the complexity of daily life as perceived by individuals in their consumer-role. Instead, a comprehensive approach should be adopted, taking into account all dimensions constituting human life; this confirms once more the necessity of acknowledging the comprehensive nature of consumption and

of daily practices (e.g. Bornemann et al 2018; Brown 2017/in press; Kaufmann-Hayoz et al. 2012; Owens&Driffill 2008). Furthermore, the significance of time as a resource to consumers should not be overlooked or neglected. Finally, when discussing environmental issues with individuals in their role as consumers it seems important to notice that though environmental protection as an outcome of energy policy measures seems to be important to people from a citizen-perspective, they do not attach much importance to natural resources from a consumer-perspective.

With regard to how individuals assess future energy policy measures in their *citizen-role* our results show, firstly, that in their reasoning for or against the policy measures respondents basically do not draw on how these measures assumedly would impact their own lives. Only few arguments do relate to how respondents anticipated the measures to affect their own lives. This is all the more remarkable because in the interview the question focusing on the impacts on the individual life of the respondent and the question about how she/he would vote were immediately consecutive questions. Our results thus confirm the findings of Kallbekken and Sælen (2011) that, in assessing future policy measures in their role as citizen, individuals are not primarily driven by their own self-interest. Secondly, our results show, that in reasoning for/against a future policy measure from a citizen perspective, individuals bring forward arguments referring to how the measure works (its basic approach), to its organisation (feasibility), to whether it is deemed to be reasonable to different actors, and arguments referring to its impact and its outcome, whereby a large majority of the arguments relate to impact and outcome. None of the arguments refers to life domains. Within the arguments referring to the assumed outcome of the future policy measures those addressing issues of environmental protection, of wellbeing and ethical concerns of justice were most prominent. In their role as citizens, although not considering how a policy measure might affect actual life management of others (life domains) individuals consider how the measure might affect the wellbeing of others. This also confirms the results of Kallbekken and Sælen (ibid.) that individuals in their role as citizens are primarily driven by assumptions about how measures affect others and about how effective they are in protecting the natural environment. We can add that the issue of how effective they are in changing human behaviour (impact) is an important concern to citizens as well.

With regard to whether the *roles of individuals as consumers and as citizens are distinct,* our results show quite clearly that the two roles as consumer and citizen trigger different patterns of thinking and arguing about future energy policy measures. We asked respondents to react to the same measures from two different perspectives. To activate the citizen-perspective, we asked respondents to simulate an activity regularly taking place in Switzerland and reserved exclusively for citizens (voting), thus addressing them in their role as citizens. To activate the consumer-perspective, we asked respondents to imagine how their life would change in case the measure in question would be implemented. This was inspired by research showing that people seem to actually do so in the face of major changes in their life lying ahead (Schäfer&Jaeger-Erben 2012). Respondents reacted differently in these two roles, that is, they switched from one to the other. Our findings thus confirm that there is a difference between people thinking in their role as consumer and people thinking in their role as citizen (e.g. Stern 2014; Stern 2017). One role does not substitute the other because their perceptions and concerns related to future energy policy measures differ. Proceeding from the assumption that both consumers and citizens are stakeholders to be involved in designing of and deciding on future energy policy leads to the conclusion that both roles – citizen and consumer – should be explicitly considered and valued. This in turn implies that policy design and the design of decision-making processes should be complemented by elements designed to inquire into the perceptions and concerns of individuals in their dual roles – consumer and citizen – and by elements designed to address individuals in both of these roles. We showed that individuals are able to switch from one role to the other on condition that the different roles are suitably activated and not mixed up.[3]

Our results show, that although *individuals think differently in their role as consumer and in their role as citizen, perceptions and concerns are not completely disjoint*. Some of the issues the respondents referred to in their reasoning for/against the selected energy policy measures (social/intergenerational justice, freedom, wellbeing/health, security) are related to life dimensions belonging to the category "good life, needs and values" (social relations, wellbeing/health, freedom/self-determination, security,

[3] We might point out here that our results on this issue have nothing to do with the debate on whether or to what extent acts of consumption are acts of citizenship or whether or on what conditions individuals act (or should act) consistently in their behaviour as citizens and in their behaviour as consumers (e.g. Soper 2007) for one thing, and with the debate on whether consumers or citizens are to hold accountable for sustainable consumption (e.g. Fischer&Barth 2014) for another thing.

develop one's own personality, value consistency, solidarity) although focusing on slightly other topics. A closer look at what respondents said with regard to the assumed impact on solidarity further validates this result: most of the respondents that both rejected the policy measure and anticipated impacts on the life dimension solidarity assumed the measure would lead to social injustice. Issues related to quality of life and justice are important both in how citizens assess future policy measures and in how consumers think about how future policy measures might impact their individual lives. This confirms and refines the findings of other scholars that pointed out the necessity of considering impacts such as "health, social equality and wellbeing" (Dowd&Hobman 2013, 191) in designing environmental policies (in this special issue, the importance of human needs is also emphasized by Burke&Stephens 2018 and by Moallemi&Malekpour 2018). According to Vries and Peterson the notion of quality of life is pivotal in exploring possible futures, because people, as a basis for decision making, use "cognitive representations of how the realization of valued outcomes – in terms of their (expected and perceived) quality of life – is connected to world events" (ibid., 1010), and because if a series of "past and anticipated events" is considered to be a serious threat to the quality of life, this "becomes a policy problem" (ibid., 1016). And Poortinga et al. (2004) show the significance of perceived quality of life with a view to policy support and to the acceptability of specific energy-saving measures. We can add that quality of life is an issue potentially linking the consumer-perspective and the citizen-perspective, that is, an individuals' perception and concerns related to good life and justice might be the fabric of individual consistency.

Finally, with regard to whether the *"Futures Wheel" method* supports individuals in clarifying and reflecting their assumptions about impacts of future energy policy measures on their everyday life our results show that this method actually provides an added value compared against a less highly structured and less systematic approach to the same question. Firstly, prior to developing their personal Futures Wheels individuals did think only of direct impacts, but in developing their Futures Wheels they named indirect impacts as well. The "Futures Wheel" method thus helps uncovering assumptions about indirect impacts. Secondly, we have evidence that applying the method leads to an increase of diversity with regard to life domains, aspects of good life, resources and emotions individuals think of. The "Futures Wheel" method thus allows for a comprehensive approach to the complexity of daily life being both highly structured and qualitative. In sum, the method provides a powerful and at the same time uncostly approach to explore anticipated impacts of (envisaged) energy policy options from a consumer perspective in advance suited to uncover assumptions individuals might not be aware of. Comparing the life dimensions respondents mentioned in their answers to the opening stimulus with those they named in the course of developing their personal Futures Wheels shows another point we consider to be interesting. We detected a slight tendency of respondents in their role as consumers not to mention impacts on elements of good life and justice as well as impacts on the resource time before they anticipated impacts by creating their Futures Wheels, although issues of good life and justice seem to be of some importance when individuals in their role as citizens assess energy policy measures. Bringing these issues to mind makes them accessible to reflection and discussion. This in turn is a prerequisite of evoking and capturing what Brown (2017/in press) terms "personal narratives" and integrating them, as he calls for, into policy design and policy making in order to design appropriate measures, and in order to find new ways of influencing dominant cultural narratives (in this special issue, the importance, role, and also the risks of narratives is discussed by Moallemi&Malekpour 2018 and by Soutar&Mitchell 2018). Thus, the "Futures Wheel" method might be a useful tool to improve the design of policy measures and to facilitate societal debate about future energy policy.

4.1 Limitations and generalisability

We are well aware of the fact that the setting of our study is quite specific due to the Swiss democratic system. Individuals in Switzerland are accustomed to be addressed in their role as citizens. This might not be the case in other political settings. Switzerland thus provides an ideal setting to inquire into the similarities and differences of the two perspectives consumer and citizen. Future research in other political settings is needed to find out to what extent our results are generalizable. What we can say at this point is, that our results do not contradict findings gained by others. Rather, they are in line with existing results (see above).

Research replicating our approach could adopt the "Futures Wheel" method to activate the consumer-perspective, because this method is not bound to a specific political setting. It can be applied in any

country. This does not apply to how we activated the citizen-perspective, because this has to be in line with the national practices of citizenship. To activate this perspective such research would have to identify a discursive activity leading an individual to react to policy measures in his/her role as citizen, that is confined to the citizen-role as much as possible and at the same time familiar to respondents in the respective country (and easily to integrate in a semi-narrative interview). It goes without saying that the energy policy measures serving as point of departure would have to be adapted as well and would have to be selected depending on the national energy policy.

5. Conclusion

A transition to a sustainable energy future cannot be achieved by looking for and implementing technical solutions only. Rather, the energy use of individuals (and households) has to change as well. Energy policies targeted at changing patterns of consumption face a special challenge in terms of societal acceptance: Individuals have to consent to them and to support their implementation in their role as citizen and individuals have to adopt them and implement them in their role as consumer. Our paper shows how the perceptions and concerns of individuals related to policy measures differ when they reflect on them in one or the other of these roles.

The call for a deliberative and participative approach to energy policy is not new (e.g. Mont&Plebys 2007; Owens&Driffill 2008; Stern 2014; Stern 2017; Wagner et al. 2016), and it is not exclusive in this special issue (Delina&Lanetos (2018) show, that the call for participation and openness links many of the papers in the collection). We reinforce this call and specify that energy policy (incl. related decision-making processes) has to be designed in consultation with both consumers and citizens as important stakeholders in policy processes addressing patterns of consumption. In designing and implementing these consultations care has to be taken to consider and acknowledge both roles of individuals and their specific perspective, the consumer-perspective and the citizen-perspective. The processes of policy design have to be designed accordingly, that is, inquiring into how individuals reason in these different roles, what they emphasize in assessing energy policy measures, and what their concerns are, has to be a constitutive part of such processes. And this should take place at a stage as early as possible (e.g. Stern 2017). Our study shows that individuals are able to anticipate future energy policies in both roles and to provide information about their perceptions and concerns, and it confirms that individuals in their role as citizen are able to participate in debates about future energy policy, because they do not primarily think in dimensions of self-interest.

The "Futures Wheel" method is an easy to apply, accessible and powerful tool to uncover perceptions and concerns of individuals related to future energy policy options in their consumer-role. Integrating the "personal narratives" of consumers into policy processes (called for by Brown 2017/in press) by exploring how they would react to envisaged methods by anticipating how these measures would impact their daily routines could easily be done with the help of the "Futures Wheel" method. To uncover perceptions and concerns of individuals related to future energy policy options in their citizen-role in other political settings than those similar to Switzerland, suitable methods will have to be nationally identified, tested, and implemented.

Uncovering individuals' perceptions and concerns in their dual roles as consumer and citizen is not enough if this does not feed into a broader dialogue. What we suggest should not be mistaken to be an invitation to a process in which researchers inquire into these perceptions and concerns and then provide governmental actors, politicians or technical experts with the resulting knowledge. Policy making is not confined to governmental actors, politicians or technical experts, and with a view to a fruitful policy-making process consumers and citizens should not be "treated as passive recipients" (Owens&Driffill 2008, 4415). Accordingly, uncovering the perceptions and concerns of consumers and citizens must be followed by a discussion about "alternative understandings of the issue" (Wagner et al. 2016, 167) involving all actors. And this discussion, in turn, has to be carefully designed and facilitated and provide real possibilities of a collaborative policy design and inclusive decision-making. Such an approach to energy policy might facilitate societal debate and consensus-finding on energy policy, and it might lead to more effective and accepted policy measures. Based on our experiences we are convinced that the benefit of the "Futures Wheel" method is not confined to exploring consumers' assumptions about how future policy options might affect their life. Rather, it could be used to facilitate societal debate on energy

policy measures by being implemented in such discussions as a tool of collaborative reflection. Whether our assumption holds true should be investigated in future research.

Finally, the results of our study draw attention to the significance of the notion of a good life and of justice in talking about the future of energy. How energy policy measures impact social justice and human wellbeing is crucial to both the citizen perspective and the consumer perspective. Looking at the arguments respondents in our study used in justifying their vote for/against the different energy policy measures reveals issues that might be potentially conflicting issues in societal debates on energy policy options (issues addressed in arguments brought forward by both proponents and opponents). Looking closer shows that quite a number of these issues address the question of whether and to what extent a specific policy measure contributes to justice and wellbeing or compromises them. The answer to such questions can only be found in societal debates because it entails to substantiate the notions of good life and justice. Issues that are potentially highly conflicting might at the same time provide solid common ground if societal discussion leads to shared viewpoints on these issues. Our study points to the fact that thinking about the future of energy cannot be confined to a debate about the future of natural environment, but should entail a debate about future quality of life and about future social justice.

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